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Tamar Meshel

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The Evolution of Interstate Arbitration and the Peaceful Resolution of Transboundary Freshwater Disputes

Tamar Meshel*

I. INTRODUCTION

There is no single natural resource on which the world depends more than freshwater.¹ Beyond basic human survival, it is required for food and energy production and is closely related to fundamental national and international interests such as socio-economic development and national security. Unfortunately, climate change, depletion of resources, population growth, unequal distribution, and inefficient use all mean that freshwater is rapidly becoming a scarce resource,² aptly named the “Blue Gold.”³ Further fueling the competition over freshwater is the fact that many of the freshwater resources available for human consumption are not contained within national borders, but are rather unevenly distributed among two or more states.⁴ As states strive to take advantage of shared freshwater passing through their territory, they often disregard or harm the interests of other states and disputes may arise as a result. Such disputes tend to involve political, economic, legal, and technical problems;⁵ they concern a broad spectrum of water-related issues, such as ownership, allocation, use, and quality; and they may deteriorate into violent conflicts.

While it is often correctly pointed out that interstate disputes over freshwater have not escalated into a full blown ‘water war’⁶ in thousands of years, it is also

* SJD candidate at the University of Toronto Faculty of Law and Research Fellow at the Max Planck Institute Luxembourg for Procedural Law; L.L.M. 2013, University of Toronto Faculty of Law; J.D. 2009, University of British Columbia Faculty of Law; B.A. 2006, University of Toronto.

1. Colleen P. Graffy, *Water, water, everywhere, Nor any drop to drink: The Urgency of Transnational Solutions To International Riparian Disputes*, 10 GEO. INT’L ENVTL. L. REV. 402, 402 (1998).

2. *Id.* at 403-405.

3. Pierre Thielbörger, *Governing International Watercourses: Implications of the Human Rights to Water*, in WATER LAW AND COOPERATION IN THE EUPHRATES-TIGRIS REGION: A COMPARATIVE AND INTERDISCIPLINARY APPROACH 45 (Aysegül Kibaroglu et al. eds., 2013).

4. These include 276 international river basins and 273 transboundary aquifer systems. WORLD WATER ASSESSMENT PROGRAMME (“WWAP”), THE UNITED NATIONS WORLD WATER DEVELOPMENT REPORT 4: MANAGING WATER UNDER UNCERTAINTY AND RISK, at 31-32 (2012), <http://www.unesco.org/new/en/natural-sciences/environment/water/wwap/wwdr/wwdr4-2012/>.

5. F.J. Berber, *The Indus Water Dispute*, 6 INDIAN Y.B. INT’L AFF. 46, 60 (1957).

6. Defined as “interstate violence that involve[s] water specifically as a scarce and/or consumable resource or as a quantity to be managed.” Juha I. Uitto & Aaron T. Wolf, *Water Wars? Geographical Perspectives: Introduction* 168 GEOGRAPHIC J. 289, 289 (2002). The last known “water war” was fought some 4500 years ago between the ancient Mesopotamian states of Lagash and Umma. Patricia Wouters, *Universal and Regional Approaches to Resolving International Water Disputes: What Lessons Learned From State Practice?*, in RESOLUTION OF INTERNATIONAL WATER DISPUTES: PAPERS EMANATING FROM THE SIXTH PCA INTERNATIONAL LAW SEMINAR, NOVEMBER 8, 2002, at 112 n.2 (The Int’l Bureau of the Permanent Court of Arbitration eds., 2003).

important to note that over 150 water-related conflicts have been recorded between 1900-2010,⁷ and that 60% of the world's international river basins currently lack any type of cooperative management framework that might assist in preventing or resolving future conflicts.⁸ Not surprisingly, many political leaders, diplomats, and scholars predict that freshwater scarcity will lead to violent war in the future,⁹ and in some regions, such as South Asia, assessments have indicated that 'water wars' cannot be expected to continue being avoided in perpetuity.¹⁰ In short, the fact that freshwater is rapidly running out while human dependency on it continues to grow suggests that disputes between states over shared freshwater resources are likely to arise with increasing frequency and that attention must be paid to their peaceful and effective resolution. Such attention is necessary since "[w]ater is one of the few scarce resources for which there is no substitute, over which there is poorly developed international law."¹¹

Indeed, even though the core principles of international water law¹² are commonly viewed as forming part of customary international law,¹³ their interpretation remains controversial¹⁴ and the main multilateral treaty codifying them has failed

7. Peter H. Gleick & Matthew Heberger, *Water Conflict Chronology*, in 7 THE WORLD'S WATER: THE BIENNIAL REPORT ON FRESHWATER RESOURCES 175-214 (2011).

8. WWAP, *supra* note 4, at 32.

9. See, e.g., GRAFFY, *supra* note 1, at 401 n.13, (managing of freshwater is "the single greatest environmental challenge facing the international community.") (quoting PHILIPPE SANDS, PRINCIPLES OF INTERNATIONAL ENVIRONMENTAL LAW 365 (1995)). See also GRAFFY, *supra* note 1, at 408 n.62 (referring to quotes by Ismail Serageldin, Vice President of the World Bank that "the wars of the next century will be about water," and by Boutros Boutros Ghali that "the next war in the Middle East would be over [water], not politics."); Stephen C. McCaffrey, *If Water Respects No Political Boundaries, Does Politics Respect Transboundary Waters?*, 102 AM. SOC'Y INT'L L. & PROC. 353, 353 (2008). "[T]he only matter that could take Egypt to war again is water," Patricia Kameri-Mbote, *Water, Conflict, and Cooperation: Lessons From the Nile River Basin*, 4 NAVIGATING PEACE, Jan. 2007, at 1, <https://www.wilsoncenter.org/sites/default/files/NavigatingPeaceIssuePKM.pdf> (quoting Anwar Sadat). See also Kofi Annan, Sec'y Gen., U.N., Address at the 97th Annual Meeting of the Association of American Geographers (Mar. 1, 2001) (transcript available at <https://iguwater.wordpress.com/news/speech-of-mr-kofi-annan-general-secretary-of-the-united-nations-during-the-97th-meeting-of-the-association-of-american-geographers/> (last visited Dec. 31, 2016)) ("[F]ierce competition for fresh water may well become a source of conflict and wars in the future.").

10. MAJORITY STAFF OF SENATE COMM. ON FOREIGN RELATIONS, 112TH CONG., AVOIDING WATER WARS: WATER SCARCITY AND CENTRAL ASIA'S GROWING IMPORTANCE FOR STABILITY IN AFGHANISTAN AND PAKISTAN 12 (Comm. Print 2011), <http://www.foreign.senate.gov/imo/media/doc/Senate%20Print%201112-10%20Avoiding%20Water%20Wars%20Water%20Scarcity%20and%20Central%20Asia%20Afgahnistan%20and%20Pakistan.pdf>.

11. JEROME DELLI PRISCOLI & AARON T. WOLF, MANAGING AND TRANSFORMING WATER CONFLICTS 1 (2010).

12. This refers to the body of international law governing non-navigational water uses, and should be distinguished from international law governing navigation, maritime issues, and the High Seas, which is generally considered to be well-developed. Joseph Dellapenna & Joyeeta Gupta, *Toward Global Law on Water*, 14 GLOBAL GOVERNANCE 437, 446 (2008); Salman M.A. Salman, *The Helsinki Rules, the UN Watercourses Convention and the Berlin Rules: Perspectives on International Water Law*, 23 INT'L J. WATER RESOURCES DEV. 625, 625 (2007).

13. Stephen McCaffrey, *International Water Cooperation in the 21st Century: Recent Developments in the Law of International Watercourses*, 118 WATER RESOURCES UPDATE 11, 11 (2001).

14. STEPHEN MCCAFFREY, THE LAW OF INTERNATIONAL WATERCOURSES 450 (2d ed. 2007).

to gain wide acceptance.¹⁵ It is hardly surprising, therefore, that disputes over fresh-water cannot be readily solved by juridical decisions.¹⁶ States are thus reluctant to submit transboundary freshwater disputes (TFDs) for legal resolution by an international court¹⁷ and most often attempt to resolve such disputes by way of bilateral negotiation or non-binding third-party mechanisms such as mediation, conciliation, and good offices.¹⁸ However, as illustrated by the protracted disputes over the Nile River in Africa and the Amu Darya and Syr Darya Rivers in Central Asia, for instance, such mechanisms are not always effective in resolving TFDs.¹⁹ Arbitration,²⁰ on the other hand, presents an effective and flexible alternative for the resolution of TFDs and it has long been suggested that “more conscious attention to the art and science of . . . arbitration can provide useful insights for resolving these conflicts without recourse to the limited solutions possible in international courts of law or, worse, the devastating possibility of armed conflict.”²¹

This Article sets out to examine the potential for arbitration to be effectively employed by states in the resolution of TFDs. Part II will describe the unique nature of TFDs, briefly examine the international law principles governing such disputes as well as the main mechanisms used for their resolution, and evaluate their adequacy. Part III will suggest a new approach to interstate arbitration, intended to ‘revive’ it in the context of TFD resolution. The first element of this approach calls for a return to the original purpose and true nature²² of arbitration, which rather than constituting a purely legal mechanism similar to judicial settlement,²³ was intended to be a more flexible, just, and quasi-diplomatic *alternative* to it. This view prescribes very different roles to arbitrators, international law, and extra-legal considerations in the resolution of interstate disputes, and places arbitration midway between judicial settlement and non-legal mechanisms on the spectrum of interstate

15. As of 19 December 2016, the *UN Watercourses Convention* had 16 signatories and 36 parties, *Chapter XXVII Environment*, U.N. TREATY COLLECTION, https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtidsg_no=XXVII-12&chapter=27&clang=_en (last visited Dec. 24, 2016).

16. Edda Kristjánsdóttir, *Resolution of Water Disputes: Lessons from the Middle East*, in *RESOLUTION OF INTERNATIONAL WATER DISPUTES: PAPERS EMANATING FROM THE SIXTH PCA INTERNATIONAL LAW SEMINAR* 351, 354 (Int’l Bureau of the Permanent Court of Arbitration ed., 2003).

17. Lucius Caflisch, *Judicial Means for Settling Water Disputes*, in *RESOLUTION OF INTERNATIONAL WATER DISPUTES: PAPERS EMANATING FROM THE SIXTH PCA INTERNATIONAL LAW SEMINAR* 235, 236 (Int’l Bureau of the Permanent Court of Arbitration ed., 2003).

18. Awn S. Al-Khasawneh, *Do judicial decisions settle water-related disputes?* in *INTERNATIONAL LAW AND FRESHWATER: THE MULTIPLE CHALLENGES* 341, 343 (Laurence Boisson de Chazournes, Christina Leb & Mara Tignino eds., 2013).

19. Marit Brochmann & Paul R. Hensel, *The Effectiveness of Negotiations over International River Claims* 55 INT’L STUD. Q. 859 (2011) (showing that negotiation of water disputes is successful only under certain conditions).

20. International arbitration has been defined as “a means by which international disputes can be definitively resolved, pursuant to the parties’ agreement, by independent, non-governmental decision-makers.” GARY B. BORN, *INTERNATIONAL COMMERCIAL ARBITRATION: COMMENTARY AND MATERIALS* 1 (2d ed. 2001).

21. Aaron T. Wolf, *International Water Conflict Resolution: Lessons from Comparative Analysis*, 13 INT’L J. WATER RESOURCES DEV. 333, 334 (1997).

22. M.C.W. Pinto, *Structure, Process, Outcome: Thoughts on the ‘Essence’ of International Arbitration*, in *THE FLAME REKINDLED: NEW HOPES FOR INTERNATIONAL ARBITRATION* 43, 44 (Sam Muller & Wim Mijs eds., 1994).

23. Settlement by an international permanent court operating on the basis of predetermined procedural rules and producing binding decisions based on the applicable rules of international law. Caflisch, *supra* note 17, at 236.

dispute resolution processes, thus making it particularly suitable for the resolution of TFDs. The second element of the proposed approach sets out to revamp the *Optional Rules for Arbitration of Disputes Relating to Natural Resources and/or the Environment*²⁴ of the Permanent Court of Arbitration (PCA) in the original quasi-diplomatic spirit of arbitration. While the *Rules* were celebrated as innovative when first adopted in 2001, they have been scarcely used by states to resolve environmental disputes, and have not been used at all in the TFD context. At the same time, no other permanent institution or tribunal has been created specifically for the resolution of TFDs. This Article will argue that the PCA and the *Rules* continue to present the greatest potential in this regard, however the *Rules* should be adapted to the specific context of TFDs and the quasi-diplomatic nature of arbitration.

II. INTERNATIONAL WATER LAW, TFDs AND THEIR RESOLUTION

For present purposes, a TFD is a dispute that:²⁵

1) Occurs between two or more states, including non-contiguous states, concerning an international drainage basin. It therefore does not include water-related disputes between states and individuals, organizations, or communities (e.g., before investment or human rights tribunals), domestic disputes between units of federal countries, or disputes between private individuals or communities;

2) Concerns fresh surface water (e.g., rivers, lakes) and groundwater resources (e.g., aquifers), but only with respect to four main water utilization issues: (a) allocation (e.g., ownership and sovereignty rights); (b) quantity (e.g., dams and diversions); (c) quality (e.g., pollution); and (d) rights of use (e.g., infrastructure, irrigation, and hydropower). Excluded disputes are those that mainly concern river boundaries and the ownership of territory in which freshwater is located or of islands, navigation, maritime issues (e.g., offshore waters, maritime boundaries, continental shelves, territorial seas, EEZs, and the High seas), disputes in which water was used as an instrument of conflict rather than the object of the conflict, and disputes between states concerning claims made on behalf of nationals or companies; and

3) Exhibits a sufficient level of conflictual interaction between the disputing states. This is assessed on the basis of the Conflict and Peace Databank's (COPDAB) International Co-operation and Conflict Scale, as adapted to water-related disputes.²⁶ Accordingly, 'disputes' are not limited to situations involving formal declarations of war or military acts, but include also situations involving

24. PERMANENT COURT OF ARBITRATION, PCA OPTIONAL RULES FOR ARBITRATION OF DISPUTES RELATING TO THE ENVIRONMENT AND/OR NATURAL RESOURCES (2001), <http://pca-cpa.org/wp-content/uploads/sites/175/2016/01/Optional-Rules-for-Arbitration-of-Disputes-Relating-to-the-Environment-and-or-Natural-Resources.pdf>.

25. This definition of a transboundary fresh water dispute is intended to achieve several interrelated objectives: (a) focus on those disputes that most concern the *use* of fresh water (rather than the allocation of territory or water as an instrument of war); (b) focus on those disputes that are most salient to states and their national interests (rather than the interests of nationals or companies); and (c) focus on the most complex and contentious disputed issues (rather than those that are governed by relatively clear and accepted international laws or norms, such as navigation issues).

26. Shira Yoffe et al., *Geography of International Water Conflict and Cooperation: Data Sets and Applications*, 40 WATER RESOURCES RES., May 2004, at 11, <http://onlinelibrary.wiley.com/doi/10.1029/2003WR002530/epdf>.

“strong verbal expressions displaying hostility,” “diplomatic-economic hostile actions,” or “political-military hostile actions,” as defined in the COPDAB Scale.²⁷ On the other hand, an interaction, claim, or event is not considered to constitute a dispute if it is not sufficiently significant and meaningful. Such situations may involve “mild verbal expressions displaying discord in interaction” and “neutral or non significant acts for the inter-nation situation” as defined in the COPDAB Scale, or mere indicators of conflict or potential for conflict.²⁸

The current legal framework governing the use of shared freshwater and the resolution of TFDs arising from such use is that of international water law, which is largely based on the limited territorial sovereignty doctrine.²⁹ This doctrine lies midway between the more extreme theories of absolute territorial sovereignty, the “Harmon Doctrine,” according to which a state is entitled to do as it pleases with waters in its boundaries without regard to its co-riparians, and absolute territorial integrity, according to which no state sharing a water resource may make any changes to it that restrict the supply of water to a co-riparian.³⁰ Limited territorial sovereignty is intended to serve as a “mutual limitation of sovereign rights”³¹ and is based on the two core substantive principles of equitable and reasonable utilization (ERU) and no significant harm (NSH).³²

The ERU principle, rooted in the sovereign equality of states,³³ is considered by most water law experts to be the basic, governing principle of international water law governing non-navigational uses of shared freshwater resources.³⁴ “It entitles each basin state to a reasonable and equitable share of water resources for the beneficial uses within its own territory,”³⁵ so that each state sharing a water resource has “an equal right to an equitable share of the uses and benefits” of that resource³⁶ and is under an obligation to “use the watercourse in a manner that is equitable and reasonable”³⁷ vis-à-vis the other states sharing the resource. Riparians are therefore

27. *Id.* at 4.

28. *Id.*

29. *See, e.g.,* Dellapenna & Gupta, *supra* note 12, at 444-45; McCaffrey, *supra* note 14, at 141-42.

30. *Id.* at 113-14.

31. Jutta Brunnée & Stephen J. Toope, *The Nile Basin Regime: A Role For Law?*, in *WATER RESOURCES PERSPECTIVES: EVALUATION, MANAGEMENT AND POLICY* 93, 106 (A.S. Alsharhan & W.W. Wood eds., 2003).

32. Some view the obligation to protect international watercourses and their ecosystems as an additional substantive principle of international water law governing non-navigational uses. McCaffrey, *supra* note 14, at 446-62. For present purposes, this principle is considered as falling within the broader “no harm” principle.

33. Mohammed S. Helal, *Sharing Blue Gold: The 1997 UN Convention on the Law of the Non-Navigational Uses of International Watercourses Ten Years On*, 18 *COLO. J. INT’L ENVTL. L. & POL’Y* 337, 342 (2007).

34. McCaffrey, *supra* note 14, at 384. *See also, e.g.,* Alistair Rieu-Clarke & Flavia Rocha Loures, *Still not in Force: Should States Support the 1997 UN Watercourses Convention?*, 18 *REV. EUR. COMP. & INT’L L.* 185, 188 (2009); OWEN MCINTYRE, *ENVIRONMENTAL PROTECTION OF INTERNATIONAL WATERCOURSES UNDER INTERNATIONAL LAW* 85 (2007).

35. Muhammad Mizanur Rahaman, *Principles of international water law: creating effective trans-boundary water resources management*, 1 *INT’L J. SUSTAINABLE SOC’Y* 207, 210 (2009).

36. McCaffrey, *supra* note 14, at 391-92.

37. Stephen McCaffrey, *The Law of International Watercourses: Present Problems, Future Trends*, in *A LAW FOR THE ENVIRONMENT* 113, 114 (Alexandre Charles Kiss & Françoise Burhenne-Guilmin eds., 1994).

“bound to act so as to conform with the principle of equity.”³⁸ However, the practical challenge of determining what constitutes each state’s fair share and what conduct or use should be considered equitable and reasonable under this principle,³⁹ has yet to be overcome. Therefore, while “the notion of equity has evolved as the only suitable standard to accommodate all likely factors and circumstances that must be taken into account when reconciling competing interests,”⁴⁰ it has also been criticized for providing no practical guidelines for water allocation.⁴¹

The NSH principle has its roots in states’ general obligation under international law not to use their territory in such a way as to cause harm to another state.⁴² It thus prohibits states in an international drainage basin to use the watercourses in their territory in a way that would cause significant harm to other basin states or to their environment.⁴³ The obligation not to cause such significant transboundary harm has been articulated in the following terms:

States have . . . the sovereign right to exploit their own resources pursuant to their own environmental and developmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.⁴⁴

Both the ERU and the NSH principles are considered to be fundamental principles of international water law⁴⁵ and as “two sides of the same coin.”⁴⁶ Nonetheless, their interrelationship remains controversial⁴⁷ and they continue to be viewed by states as competing, elusive, legally indeterminate, and vague.⁴⁸ Unless the

38. McCaffrey, *supra* note 14, at 146, (citing PAUL FAUCHILLE, *TRAITÉ DE DROIT INTERNATIONAL PUBLIC* (8th ed. 1925)).

39. HILAL ELVER, *PEACEFUL USES OF INTERNATIONAL RIVERS: THE EUPHRATES AND TIGRIS RIVERS DISPUTE* 136-37 (2002).

40. Alistair Rieu-Clarke & Alexander Lopez, *Factors that could limit the effectiveness of the UNWC, in THE UN WATERCOURSES CONVENTION IN FORCE: STRENGTHENING INTERNATIONAL LAW FOR TRANSBOUNDARY WATER MANAGEMENT* 77, 87 (Flavia Rocha Loures & Alistair Rieu-Clarke eds., 2013).

41. Owen McIntyre, *Utilization of shared international freshwater resources – the meaning and role of “equity” in international water law*, 38 *WATER INT’L* 112, 112 (2013). For instance, the ERU principle was referenced by the ICJ in the *Gabcikovo-Nagymaros* case, however its application failed to resolve the dispute and the Court “essentially deferred the adjustment of the balance between environmental protection and economic development to the parties themselves.” Tim Stephens, *International environmental disputes: to sue or not to sue?*, in *LITIGATING INTERNATIONAL LAW DISPUTES: WEIGHING THE OPTIONS* 284, 298 (Natalie Klein ed., 2014).

42. Also known as the maxim *sic utere tuo ut alienum no laedas*.

43. Rahaman, *supra* note 35, at 210-11.

44. U.N. Conference on Environment and Development, *Rio Declaration on Environment and Development*, U.N. Doc. A/CONF.151/26/Rev.1 (Vol. I), annex I (Aug. 12, 1992).

45. Salman M.A. Salman, *The Future of International Water Law: Regional Approaches to Shared Watercourses?*, in *LOOKING TO THE FUTURE: ESSAYS ON INTERNATIONAL LAW IN HONOR OF W. MICHAEL REISMAN* 907, 918 (Mahnoush Arsanjani et al. eds., 2010); Stephen McCaffrey, *The UN Convention on the Law of the Non-Navigational Uses of International Watercourses: Prospects and Pitfalls*, in *INTERNATIONAL WATERCOURSES-ENHANCING COOPERATION AND MANAGING CONFLICT* 17, 26-27 (Salman M. A. Salman & Laurence Boisson de Chazournes eds., 1998).

46. McCaffrey, *supra* note 14, at 436.

47. *Id.* at 450.

48. EYAL BENVENISTI, *SHARING TRANSBOUNDARY RESOURCES* 163 (2002); Shlomi Dinar, *Assessing Side-payment and Cost-sharing Patterns in International Water Agreements: The Geographic and Economic Connection*, 25 *POL. GEOGRAPHY* 412, 415 (2006); Halla Qaddumi, *Practical approaches to*

states sharing a freshwater resource agree on a common interpretation of the international water law principles of ERU and NSH, it is not always clear which of them should take precedence in the resolution of TFDs and they may be interpreted in contradictory ways.⁴⁹ Therefore, applying these principles in the resolution of TFDs has proven difficult⁵⁰ and has resulted in their infrequent use by states.⁵¹

This is particularly evident in TFDs between upstream and downstream states, where, for instance, an upstream state increases its use of the shared waters for hydropower production, which may reduce the water supply to the downstream state for its agricultural water needs.⁵² In such a scenario, the upstream state might invoke the ERU principle to protect its interests in the utilization of the shared waters, while the downstream state might emphasize the NSH principle for the same purpose. Since the main users of transboundary freshwater resources have historically been downstream states,⁵³ a similar scenario could result from such a state's continuous development of a shared freshwater resource to the point where it threatens an upstream state's reasonable future use.⁵⁴ Since these principles are "still too rudimentary and vague to be able to deal comprehensively and efficiently with the complexity and subtlety of international water disputes," states may refrain from applying them in the resolution of such TFDs and avoid mechanisms that rely on them, such as judicial settlement.⁵⁵ At the same time, international water law does not provide for a specific alternative mechanism that states should use in the resolution of TFDs, and as *lex specialis* it thus adds little to states' existing obligation

transboundary water benefit sharing 6 (Overseas Dev. Inst., Working Paper No. 292, 2008), <http://www.odi.org.uk/sites/odi.org.uk/files/odi-assets/publications-opinion-files/2576.pdf>. See also, Christine Traversi, *The Inadequacies of the 1997 Convention on International Water Courses and 2008 Draft Articles on the Law of Transboundary Aquifers*, 33 HOUS. J. INT'L L. 453, 476, 481 (2011); Olivia Odom & Aaron T. Wolf, *Institutional resilience and climate variability in international water treaties: the Jordan River Basin as "proof-of-concept,"* 56 HYDROLOGICAL SCI. J. 703, 705 (2011); Malgosia Fitzmaurice & Gerhard Loibl, *Current State of Development in the Law of International Watercourses*, in INTERNATIONAL WATERCOURSES LAW FOR THE 21ST CENTURY 19, 33 (Surya P. Subedi ed., 2005); B.S. Chimni, *A Tale of Two Treaties: The Gange and Mahakali Agreements and the Watercourses Convention*, in INTERNATIONAL WATERCOURSES LAW FOR THE 21ST CENTURY 63, 102 (Surya P. Subedi ed., 2005). Some contest this claim, see, e.g., MCCAFFREY, *supra* note 14, at 407-408, 436, 445.

49. Marwa Daoudy, *Hydro-hegemony and international water law: laying claims to water rights*, 10 WATER POLICY 89, 95 (Supp. 2 2008); NAHID ISLAM, *THE LAW OF NON-NAVIGATIONAL USE OF INTERNATIONAL WATERCOURSES: OPTIONS FOR REGIONAL REGIME BUILDING IN ASIA* 140, 142 (2010).

50. Daoudy, *supra* note 49, at 95; ISLAM, *supra* note 49, at 140, 142.

51. INTERNATIONAL WATERS IN SOUTHERN AFRICA 75-76 (Mikiyasu Nakayama ed., 2003); CHRISTINA LEB, *COOPERATION IN THE LAW OF TRANSBOUNDARY WATER RESOURCES* 104 (2013). One study examining the inclusion of legal principles in international river agreements has found that "equitable use" as a specific water allocation mechanism was included only in 26% of the agreements surveyed, and that the principle of "avoiding significant harm to other" was included in 27% of the agreements. Ken Conca, Fengshi Wu & Joanne Neukirchen, *Swimming Upstream: In Search of a Global Regime for International Rivers*, in GOVERNING WATER: CONTENTIOUS TRANSNATIONAL POLITICS AND GLOBAL INSTITUTION BUILDING 93, 111 (Ken Conca 2006).

52. MCCAFFREY, *supra* note 14, at 410.

53. ELVER, *supra* note 39, at 139.

54. MCCAFFREY, *supra* note 14, at 412-13; David Grey & Dustin Garrick, *Water security, perceptions and politics: the context for international watercourse negotiations*, in INTERNATIONAL LAW AND FRESHWATER: THE MULTIPLE CHALLENGES 37, 46 (Laurence Boisson de Chazournes, Christina Leb & Mara Tignino, eds., 2013).

55. Al-Khasawneh, *supra* note 18, at 341.

under general international law to resolve disputes peacefully by way of “negotiation, enquiry, mediation, conciliation, arbitration, judicial settlement, resort to regional agencies or arrangements, or other peaceful means of their own choice.”⁵⁶

In the TFD context,⁵⁷ the dispute resolution mechanisms most commonly used by states are bilateral negotiation⁵⁸ and third-party non-binding mechanisms.⁵⁹

A. *Bilateral Negotiation*

States most often attempt to resolve TFDs by way of bilateral non-binding mechanisms, and there is a long history of recourse to such mechanisms in the resolution of these disputes.⁶⁰ The 1911 *Madrid Declaration*,⁶¹ for instance, provided for the creation of permanent joint commissions for the resolution of water disputes, and a similar provision was included in the 1923 *Geneva Convention*,⁶² 1961 *Salzburg Resolution*,⁶³ and 1966 *Helsinki Rules*.⁶⁴ Joint commissions have indeed been established in relation to many shared freshwater resources.⁶⁵ The tendency of states to resort to bilateral non-binding mechanisms such as joint commissions may in part be a result of the “vague standards” of international water law, which may cause states to proceed with negotiations until agreement is reached, rather than enter into litigation with unpredictable results.⁶⁶ Bilateral negotiation also allows the parties to control the process and the outcome; provides a generally simpler and less costly procedure; and favors a compromise. Moreover, the parties, who are best placed to develop a workable solution, are themselves responsible for resolving the dispute and any settlement devised by them is thus more likely to be accepted than an imposed settlement.⁶⁷

However, bilateral non-binding mechanisms may also prove ineffective in resolving disputes since a negotiated settlement may reflect the parties’ relative negotiating power, it is inherently political and therefore subject to external pressures, and the parties may not have access to technical expertise required for the resolution

56. U.N. Charter art. 33, ¶ 1.

57. The present discussion concerns only the use of dispute resolution mechanisms in the *resolution* of TFDs. While some mechanisms have proven useful in *managing* shared resource and *preventing* disputes, they are arguably limited in their ability to resolve TFDs effectively and efficiently once these have arisen. DELLI PRISCOLI & WOLF, *MANAGING AND TRANSFORMING WATER CONFLICTS* 7, 9 (2010).

58. This includes, e.g., bilateral negotiations, consultations, and diplomacy.

59. These include, e.g., mediation, conciliation, good offices, fact-finding, joint institutions or commissions, and any other non-binding process involving a third party, whether a State, organization or an individual.

60. Stephen C. McCaffrey, *Water Disputes Defined: Characteristics and Trends for Resolving Them*, in *RESOLUTION OF INTERNATIONAL WATER DISPUTES: PAPERS EMANATING FROM THE SIXTH PCA INTERNATIONAL LAW SEMINAR* 49, 89 (Int’l Bureau of the Permanent Court of Arbitration ed., 2003); Caflisch, *supra* note 17.

61. *INTERNATIONAL WATER LAW: SELECTED WRITINGS OF PROFESSOR CHARLES B. BOURNE* 206 (Patricia Wouters ed., 1997) [hereinafter Wouters].

62. Geneva Convention Relative to the Development of Hydraulic Power Affecting more than One State and Protocol of Signature, art. 12, Dec. 9, 1923, 36 L.N.T.S. 77.

63. Wouters, *supra* note 61, at 296.

64. *Helsinki Rules on the Uses of the Waters of International Rivers*, in *REPORT OF THE FIFTY-SECOND CONFERENCE OF THE INTERNATIONAL LAW ASSOCIATION HELD AT HELSINKI, AUGUST 14-20, 1966*, at 486, 488 (arts. XXXI-XXXIII) (1967).

65. For a partial list see Wouters, *supra* note 61, at 119, n.18.

66. Kristjánsdóttir, *supra* note 16, at 355.

67. Richard B. Bilder, *International Third Party Dispute Settlement*, 17 *DENV. J. INT’L L. & POL’Y* 471, 477 (1988).

of a dispute.⁶⁸ Since negotiations do not always permit the facts to be established objectively and impartially,⁶⁹ they run the risk of a party denying that a dispute exists, advancing unreasonable claims, or dragging its feet.⁷⁰ Negotiation also allows states to opt for extreme positions that may lead to deadlock since it lacks “efficient restraints” on the negotiating parties, it may last for a long period of time before reaching a mutually accepted agreement, if any, and it may well end fruitlessly.⁷¹ Moreover, the goals of the various parties to a negotiation may not be achieved as expected and compromises or agreements that were once concluded through negotiation may not be put into effect in the following years.⁷² Ultimately, a variety of factors may impinge on any negotiation, including the parties’ systems of government, the individual psychology of political leaders, and public opinion.⁷³

In the context of TFD resolution, negotiation may also prove inadequate to protect the interests and positions of weaker states in situations of power asymmetry⁷⁴ and water-hegemony, for instance where the parties have “uneven bargaining powers or unequal legal and technical expertise in the matters involved.”⁷⁵ Moreover, where states wish to adopt and apply the principles of international water law to their dispute, this may prove difficult to do in bilateral negotiations since “the objective determination of the equitable and reasonable uses of a transboundary watercourse or whether or not a particular project may result in significant harm to another state is, at best, an unworkable exercise” without the involvement of an impartial third party.⁷⁶ This is especially true where the equity and reasonableness of a water use, as well as the magnitude of the harm, are mere projections.⁷⁷ Put another way,

...in the absence of agreement between the states concerned on what amounts to an equitable allocation of the uses and benefits of a watercourse, only an impartial third party to whom the question has been entrusted by those states can authoritatively determine whether they are utilizing the waters in an equitable and reasonable manner...even assuming that [this doctrine] were applied “correctly” by a State acting alone, it would be very difficult, and perhaps impossible, to prove conclusively to the other states using the watercourse that the first state’s utilization was

68. *Id.* at 489, 492.

69. Charles Manga Fombad, *Consultation and Negotiation in the Pacific Settlement of International Disputes*, in INTERNATIONAL DISPUTE SETTLEMENT 52 (Mary Ellen O’Connell ed., 2003).

70. Patricia K. Wouters et al., *Sharing Transboundary Waters An Integrated Assessment of Equitable Entitlement: The Legal Assessment Model* 130 (IHP-VI Technical Document in Hydrology No. 74, UNESCO Working Series SC 2005/WS/13, 2005), <http://unesdoc.unesco.org/images/0013/001397/139794e.pdf>.

71. RONGXING GUO, TERRITORIAL DISPUTES AND CONFLICT MANAGEMENT: THE ART OF AVOIDING WAR 134 (2012).

72. *Id.*

73. RAYMOND COHEN, NEGOTIATING ACROSS CULTURES: INTERNATIONAL COMMUNICATION IN AN INTERDEPENDENT WORLD 18 (Rev. ed., 1997).

74. Naho Mirumachi, Mark Zeitous & Jeroen Warner, *Transboundary water interactions and the UN Watercourses Convention*, in THE UN WATERCOURSES CONVENTION IN FORCE: STRENGTHENING INTERNATIONAL LAW FOR TRANSBOUNDARY WATER MANAGEMENT 352, 353 (Flavia Rocha Loures & Alistair Rieu-Clarke eds., 2013).

75. Wouters et al., *supra* note 70, at 130.

76. Gabriel Eckstein, *Water Scarcity, Conflict, and Security in a Climate Change World: Challenges and Opportunities for International Law and Policy* 27 WIS. INT’L L.J. 409, 435 (2009).

77. *Id.* at 453.

in fact “equitable” in relation to them. This consideration makes the involvement of a third party all the more important to the doctrine’s proper and effective application.⁷⁸

With the increasing scarcity of, and demand for, freshwater, the likelihood of states being able to achieve such balance on their own diminishes even further, and entrusting such determination to a third party may thus be required. Negotiation should therefore be considered merely as the first step states should take to resolve a TFD,⁷⁹ since “working out their troubles on their own or shaking hands and getting along may work occasionally, but most of the time the conflict will only be sent underground to resurface later in more destructive ways.”⁸⁰ If negotiations fail or if the parties are unable to enter into negotiations at all, other means of dispute settlement based on the involvement of a neutral third party should be considered.⁸¹

B. Third-Party Non-Binding Mechanisms

Considering the limits of bilateral negotiation, states may wish to involve third parties in the resolution of their TFDs to assist them in reaching an amicable settlement. Non-binding third-party mechanisms such as mediation,⁸² conciliation,⁸³ good offices,⁸⁴ inquiry/fact-finding,⁸⁵ etc., have been said to offer “flexible remedies” and “may involve more kinds of non-state actors” than both bilateral negotiation and judicial settlement.⁸⁶ Therefore, these methods may be more suitable for “providing concessions and reaching a compromise than direct negotiations.”⁸⁷ Such dispute resolution processes may be offered, for instance, by neutral states or international organizations, as well as internal or external individuals.⁸⁸ An individual may have the advantage of acting more freely in the mediation process since they would not be “encumbered by the world politics outside the dispute, which usually affect states and official mediators.”⁸⁹ Generally, third-party intervention

78. Stephen C. McCaffrey, *The Law of International Watercourses: Present Problems, Future Trends*, in *A LAW FOR THE ENVIRONMENT: ESSAYS IN HONOUR OF WOLFGANG E. BURHENNE* 113, 115 (Alexandre Kiss & Françoise Burhenne-Guilmin eds., 1994).

79. Fombad, *supra* note 69, at 44-45.

80. GUO, *supra* note 71, at 135.

81. Wouters et al., *supra* note 70, at 130.

82. “Where a third party intervenes to reconcile the claims of the contending parties and to advance his own proposals aimed at a mutually acceptable compromise solution.” U.N. OFFICE OF LEGAL AFFAIRS CODIFICATION DIVISION, *HANDBOOK ON PEACEFUL SETTLEMENT OF DISPUTES BETWEEN STATES*, at 40, U.N. Sales No. E.92.V.7 (1992).

83. This process “combines the elements of both inquiry and mediation” by providing the parties with “a better understanding of each other’s case by undertaking objective investigation and evaluation of all aspects of the dispute and, on the other hand, provid[ing] them with an informal third-party machinery for the negotiation and non-judicial appraisal of each other’s legal and other claims.” *Id.* at 45.

84. This process “seeks to encourage the parties to the dispute to resume negotiations, thus providing them with a channel of communication.” *Id.* at 33.

85. The “investigation or elucidation of a disputed issue of fact.” *Id.* at 24, 26.

86. Kristjánssdóttir, *supra* note 16, at 357.

87. Salman M. A. Salman, *Mediation of International Water Disputes - the Indus, the Jordan, and the Nile Basins Interventions*, in *INTERNATIONAL LAW AND FRESHWATER: THE MULTIPLE CHALLENGES* 360, 366 (Laurence Boisson de Chazournes, Christina Leb & Mara Tignino eds., 2013).

88. Wouters et al., *supra* note 70, at 130.

89. Salman, *supra* note 87, at 364.

is more likely to be accepted by the parties when there is a stalemate or when other options, particularly the military option, were tried and failed.⁹⁰

In the context of TFD resolution, the 1997 UN Watercourses Convention (*UNWC*),⁹¹ the main international treaty governing the non-navigational uses of international waterways which entered into force in August 2014, provides for dispute resolution by negotiation, failing which the parties “may jointly seek the good offices of, or request mediation or conciliation by, a third party, or make use, as appropriate, of any joint watercourse institutions that may have been established by them or agree to submit the dispute to arbitration or to the International Court of Justice.”⁹² If after six months the parties have not been able to settle their dispute through such means, the Convention provides that the “dispute shall be submitted, at the request of any of the parties to the dispute, to impartial fact-finding . . . unless the parties otherwise agree.”⁹³ Therefore, the *UNWC* includes a so-called “compulsory system of conciliation”⁹⁴ through a default option of impartial fact-finding that is intended to provide disputing parties with “recommendations . . . for an equitable solution of the dispute, which the parties concerned shall consider in good faith.”⁹⁵ However, such recommendations are not binding on the parties, nor is there a reference to international law principles in this mechanism.⁹⁶

Moreover, this dispute resolution provision of the *UNWC* was controversial and the number of states that voted against it or abstained (including important freshwater states such as India, China, France, Colombia, and Turkey) almost equaled the number of votes in its favor.⁹⁷ Some of the states abstaining claimed that the dispute resolution provision did not go far enough in terms of compulsory settlement.⁹⁸ Indeed, several signatory states have declared themselves bound by either International Court of Justice (ICJ) adjudication or arbitration for the resolution of disputes under the Convention, indicating both a need and a desire for more robust mechanisms for the resolution of TFDs, at least on the part of some states.⁹⁹

Given the heavy reliance in TFDs on “expert recommendations concerning technical matters, and the fact that all international water disputes are inevitably

90. *Id.* at 366.

91. G.A. Res. 51/229, annex, Convention on the Law of the Non-navigational Uses of International Watercourses, (July 8, 1997), http://www.un.org/en/ga/search/view_doc.asp?symbol=A/RES/51/229.

92. *Id.* art. 33(2).

93. *Id.* art. 33(3).

94. Caflisch, *supra* note 17, at 244.

95. G.A. Res. 51/229, *supra* note 91, art. 33(8).

96. Caflisch, *supra* note 17, at 244-45.

97. *Id.* at 244.

98. *Id.*

99. *Status of the Watercourses Convention*, INT’L WATER LAW PROJECT, http://www.internationalwaterlaw.org/documents/intldocs/watercourse_status.html (last updated July 31, 2015) (Hungary has declared itself “...bound by either of the two means for the settlement of disputes (International Court of Justice, arbitration), reserving its right to agree on the competent body of jurisdiction, as the case may be.” Montenegro has declared that: “in respect of any dispute not resolved in accordance with Article 33 paragraph 2 of the said Convention, Montenegro recognizes as compulsory ipso facto, and without special agreement in relationship to any party accepting the same obligation:

1.Submission of the dispute to the International Court of Justice; and/or

2.Arbitration by an arbitral tribunal established and operating, unless the parties to the dispute otherwise agreed, in accordance with the procedure laid down in the annex to the present Convention.”

The Netherlands has declared that: “in accordance with paragraph 10 of Article 33 of the United Nations Convention on the Law of the Non-Navigational Uses of International Watercourses, that it accepts both means of dispute settlement referred to in that paragraph as compulsory in relation to any Party accepting one or both means of dispute settlement.”).

very fact-sensitive,”¹⁰⁰ inquiry and fact-finding may be particularly useful in this context. These mechanisms allow states to refer questions to a panel of experts for impartial third-party investigation of factual or technical matters, and the International Law Commission (ILC) has opined that fact-finding or inquiry will frequently resolve a TFD before any binding process is necessary.¹⁰¹ Another similar mechanism that might prove useful in the context of TFDs is conciliation on the basis of expert determination. A permanent or ad hoc joint institution created by the states sharing the freshwater resource may carry out such expert determination, for instance. Such an institution would ideally include technical experts in addition to legal experts, as the former tend to be in the best position to conduct fact-finding regarding the watercourse that they were mandated to monitor, and constitute a forum for resolving disputes on a non-political level.¹⁰² In terms of the identity of such experts, some suggest that all things being equal, an outsider has a greater chance of succeeding since an insider may be part of the problem, may be perceived as favoring one of the sides, and the parties may be hesitant to share confidential information with such an insider.¹⁰³

Ultimately, however, all third-party non-binding mechanisms suffer from a common disadvantage that may hinder the effective resolution of TFDs. They all produce a result that fails to “give expression to an affirmative endeavor to effect accord between the states at variance” and therefore these states remain free to draw their own, potentially divergent, conclusions as to the course to be followed.¹⁰⁴ In other words, the result these mechanisms produce may reflect the lowest common denominator on which the disputing parties could agree rather than a definitive and operative solution, and may lead to further conflict concerning their actual application in practice. This may in part explain why mediation of TFDs, for instance, has had mixed success. While at least one such mediation, namely the World Bank mediation of the Indus River dispute between India and Pakistan, was successful, several other attempted mediations of TFDs were unsuccessful, such as the World Bank’s attempt to mediate the Nile River dispute and the United States’ attempt to mediate the Jordan River dispute.¹⁰⁵

III. A NEW APPROACH TO INTERSTATE ARBITRATION

While both bilateral negotiation and third-party non-binding mechanisms have their respective advantages, they lack an authoritative framework for compelling participation and enforcing agreed-upon outcomes.¹⁰⁶ In light of these limitations, a procedure for the orderly investigation and resolution¹⁰⁷ of disputes is required. Moreover, the involvement of international judicial and quasi-judicial institutions

100. Kristjánssdóttir, *supra* note 16, at 357.

101. Wouters et al., *supra* note 70, at 131.

102. Kristjánssdóttir, *supra* note 16, at 357-358; Wouters et al., *supra* note 70, at 131.

103. GUO, *supra* note 71, at 135-36.

104. Charles Cheney Hyde, *The Place of Commissions of Inquiry and Conciliation Treaties in the Peaceful Settlement of International Disputes*, in INTERNATIONAL DISPUTE SETTLEMENT 105, 106 (Mary Ellen O’Connell ed., 2003).

105. Salman, *supra* note 87, at 369-403.

106. Anna Spain, *Beyond Adjudication: Resolving International Resource Disputes in an Era Of Climate Change*, 30 STAN. ENVTL. L.J. 343, 378 (2011).

107. Joseph Dellapenna, *The Customary International Law of Internationally Shared Fresh Waters*, 1 INT’L J. GLOBAL ENVTL. ISSUES 264, 277 (2001).

has been viewed as beneficial in cases of “regional or global environmental problems” and in cases of “local transboundary harm,”¹⁰⁸ both of which may arise in TFDs. Indeed, many water-related international instruments¹⁰⁹ provide for the resolution of disputes by way of international adjudication, which has traditionally encompassed both judicial settlement and arbitration.¹¹⁰ In the context of TFDs, binding third-party resolution may in fact “be the only way out if all other means fail and if the alternative is a stalemate that will result in an unnecessary prolongation of international tension.”¹¹¹ Nonetheless, states remain reluctant to submit TFDs to a purely “legal” mechanism such as judicial settlement by the ICJ.¹¹² States are similarly reluctant to use arbitration for the resolution of TFDs.¹¹³ The underutilization of arbitration in this context may in part result from its conflation with judicial settlement and the failure of states to recognize it as an independent mechanism.¹¹⁴ Since “international law arbitration is...deeply enmeshed with adjudication”¹¹⁵ states tend to perceive both as purely legal mechanisms suitable only for the resolution of questions of law through the application of legal principles, and thus may view them as inappropriate in the context of complex disputes, such as TFDs, that involve complex non-legal, political, or vital issues.

This perception, however, is misguided and flies in the face of the original purpose and true nature of interstate arbitration as a distinct dispute resolution mechanism that is substantively and procedurally different from judicial settlement. In fact, arbitration “may naturally be a general alternative or complement to typically judicial or quasi-judicial means”¹¹⁶ and may present the most suitable option for the

108. CATHRIN ZENGERLING, GREENING INTERNATIONAL JURISPRUDENCE: ENVIRONMENTAL NGOS BEFORE INTERNATIONAL COURTS, TRIBUNALS, AND COMPLIANCE COMMITTEES 77 (2013).

109. See, e.g., Wouters, *supra* note 61, at 206 (discussing the 1961 Salzburg Resolution, art. 8 and the 1966 Helsinki Rules, art. XXXIV).

110. Spain, *supra* note 106, at 354.

111. Wouters et al., *supra* note 70, at 133.

112. The article focuses on the ICJ since it is the most relevant international forum for the adjudication of TFDs. Other potentially relevant regional courts include the European Court of Justice, which may be seized to resolve disputes concerning EU water law. Andrea M. Keessen et al., *Transboundary river basin management in Europe Legal instruments to comply with European water management obligations in case of transboundary water pollution and floods*, 4 UTRECHT L. REV. 35, 44-45 (2008).

113. One study indicates that out of 155 peaceful settlements attempts in shared river disputes between 1816-2001, only seven involved binding resolution by a third party. Stephen E. Gent & Megan Shannon, *Decision Control and the Pursuit of Binding Conflict Management: Choosing the Ties that Bind*, 55 J. CONFLICT RESOL. 710, 723 (2011).

114. Other reasons may include the binding nature of the process, the lack of control over the outcome, fear of unfavorable results, reluctance to give a dispute a high international profile, concerns about the expense, inconvenience and delay involved in the proceedings, lack of familiarity with international judicial procedures, and uncertainty regarding the enforceability of any eventual judgment, McCaffrey, *supra* note 14, at 254; Sara McLaughlin Mitchell, Kelly M. Kaderaand & Mark J. C. Crescenzi, *Practicing Democratic Community Norms: Third-party Conflict Management and Successful Settlements*, in INTERNATIONAL CONFLICT MEDIATION: NEW APPROACHES AND FINDINGS 243 (Jacob Bercovitch & Scott Sigmund Gartner eds., 2009); Stephen E. Gent & Megan Shannon, *Bias and the Effectiveness of Third-Party Conflict Management Mechanisms*, 28 CONFLICT MGMT. & PEACE SCI. 124 (2011).

115. Martins Paparinskis, *Comment to For or Against International Arbitration: A Perspective of International Law of Dispute Settlement*, EJIL: TALK!, (June 10, 2015, 15:24), <http://www.ejiltalk.org/for-or-against-international-arbitration-a-perspective-of-international-law-of-dispute-settlement/>.

116. Paulo Canelas de Castro, *Prospects for the Future of International Water Law: the View Projected by the Epistemic Community*, in RESOLUTION OF INTERNATIONAL WATER DISPUTES 371, 408 (Int'l Bureau of the Permanent Court of Arbitration ed., 2003).

resolution of TFDs since it is “designed for just such occasions as those where parties prefer to settle their disputes privately and informally, in that it can be designed for quick, practical and efficient resolution.”¹¹⁷ This section therefore proposes a new approach to interstate arbitration in the context of TFD resolution. The first element of this approach calls for a return to the original purpose and true nature of arbitration, which was not intended to constitute a strictly legal mechanism similar to judicial settlement¹¹⁸ but was rather viewed as a more flexible, just, and diplomatic *alternative* to it. The second element sets out to revamp the *Optional Rules for Arbitration of Disputes Relating to Natural Resources and/or the Environment (Rules)* of the PCA in this quasi-diplomatic spirit of arbitration.

A. The “True Nature”¹¹⁹ of Interstate Arbitration

In the times of ancient Greece and China, arbitration was distinguished from determinations by judges because an arbitrator could consider the equity of the case, whereas a judge was bound by the letter of the law.¹²⁰ Such “equity” included “every thing, which it is more proper to do than to omit, even beyond what is required by the express rules of justice.”¹²¹ Compromissory clauses providing for dispute resolution by arbitration were included in interstate treaties as far back as 418 B.C., when a treaty of peace between Sparta and Argos was concluded.¹²² Arbitration was used in those times to resolve a wide variety of interstate issues ranging from frontiers to breaches of peace by armed attack.¹²³ The use of interstate arbitration continued during the Middle Ages, “offering the singular spectacle of conciliation and peace advancing between populations of the most warlike character.”¹²⁴ Arbitration was often resorted to not only to prevent wars but also to end them by utilizing both its “legal” and “diplomatic” dimensions to reconcile the parties and re-establish peace¹²⁵ in accordance with the rules of law and “in the most useful and suitable way.”¹²⁶

The modern era of interstate arbitration is commonly viewed as commencing with the signing of the *Jay Treaty* of 1794 between Great Britain and the United States, which was designed to resolve various disputes between the two countries that threatened to result in war.¹²⁷ With respect to three such disputes that were not settled in the Treaty itself, including one concerning territory, it provided for resolution by a quasi-diplomatic arbitral process that combined legal proceedings and diplomatic negotiations¹²⁸ and retained many of the traditional two-dimensional

117. GUO, *supra* note 71, at 140.

118. Settlement by an international permanent court operating on the basis of predetermined procedural rules and producing binding decisions based on the applicable rules of international law. Caflisch, *supra* note 17, at 236; ZENGERLING, *supra* note 108, at 79.

119. Pinto, *supra* note 22, at 44.

120. M.C.W. Pinto, *The Prospects for International Arbitration: Inter-State Disputes*, in INTERNATIONAL ARBITRATION: PAST AND PROSPECTS 63, 65 (A.H.A. Soons ed., 1990).

121. *Id.*

122. JACKSON H. RALSTON, INTERNATIONAL ARBITRATION FROM ATHENS TO LOCARNO 157 (1929).

123. *Id.* at 158.

124. *Id.* at 176.

125. *Id.* at 181.

126. *Id.* at 180.

127. Pinto, *supra* note 120, at 66.

128. The commissions were comprised solely of the parties’ nationals, which some argue “encouraged a high level of consensus-seeking.” Charles H. II. Brower, *The Functions and Limits of Arbitration and*

features of arbitration. For instance, in one of these disputes the parties were silent regarding how the arbitration commission was to decide, and it based its decision largely on equity and did not become too involved in the application of international law.¹²⁹ The remaining two disputes, moreover, were explicitly to be decided according to “justice, equity and the law of nations.”¹³⁰

The successful settlements achieved by some of the arbitral commissions under the *Jay Treaty* have largely been credited to their “spirit of negotiation and compromise”¹³¹ and to the arbitrators acting “as negotiators rather than as judges.”¹³² While they satisfied the legal dimension of the arbitral process by issuing reasoned awards based on the application of legal principles, these commissions were considered to work best where the subject-matter of the dispute allowed the commissioners to give a measure of satisfaction to both sides since this permitted them to employ the diplomatic dimension of arbitration in order to produce an effective and fair outcome.¹³³ The success of these arbitrations, among others,¹³⁴ resulted in a steady increase in the number of interstate arbitration agreements during the nineteenth century.¹³⁵ These often instructed the arbitrators to decide “according to justice” or “according to principles of justice and equity,”¹³⁶ thereby emphasizing their role as “diplomats” rather than “judges.” Moreover, at a Conference of the Association for the Reform and Codification of the Law of Nations¹³⁷ in 1873 it was unanimously agreed that arbitration was to be regarded “as a means essentially just and reasonable, and even obligatory on all nations, of terminating international differences which cannot be settled by negotiation.”¹³⁸ At a later seating of the Conference, while defining one of the objects of the Association as “the question of International Law,” it was repeated that “the principal object, nevertheless, [was] to be Arbitration as a means of settlement of all differences between nations,”¹³⁹ whether involving legal or non-legal issues.

However, this rise in prominence of interstate arbitration was essentially an “Atlantic movement” spearheaded by the states of Europe and America, and thus it became greatly influenced by the European legal tradition and as a result gradually evolved into a search for “orderly” dispute settlement through the application of law and institutionalized “compulsory arbitration,”¹⁴⁰ culminating in the 1899 and 1907

Judicial Settlement Under Private and Public International Law 18 DUKE J. COMP. & INT’L L. 259, 266, 270-271 (2008); KAJ HOBÉR, *ESSAYS ON INTERNATIONAL ARBITRATION* 3-4 (2005).

129. HOBÉR, *supra* note 128, at 4, 8.

130. Pinto, *supra* note 120, at 85; RALSTON, *supra* note 122, at 191-192; HOBÉR, *supra* note 128, at 5-6.

131. Pinto, *supra* note 22, at 59.

132. Pinto, *supra* note 120, at 68 (quoting J.L. SIMPSON & H. FOX, *INTERNATIONAL ARBITRATION: LAW AND PRACTICE* 3 (1959)).

133. *Id.*

134. Such as the 1814 arbitrations between the United States and Great Britain under the Treaty of Ghent and the 1871 *Alabama claims Arbitration* under the Treaty of Washington. Pinto, *supra* note 120, at 72; HOBÉR, *supra* note 128, at 13-18; Henry T. King Jr. & James D. Graham, *Origins of Modern International Arbitration* 12 DISP. RESOL. J. 42, 46 (1996).

135. Pinto, *supra* note 120, at 69.

136. *Id.* at 85; HOBÉR, *supra* note 128, at 13.

137. The name of which was changed to the International Law Association in 1895.

138. Henry Richard, *The Recent Progress of International Arbitration: A Paper*, in *ARBITRATION: TWO VIEWS: THE RECENT PROGRESS OF INTERNATIONAL ARBITRATION* 2 (1971).

139. *Id.*

140. Pinto, *supra* note 120, at 70-72; Pinto, *supra* note 22, at 60.

Hague Peace Conferences and the establishment of the PCA.¹⁴¹ Thus began the “judicialization”¹⁴² process of interstate arbitration, whereby international agreements require that arbitral decisions be based on international law,¹⁴³ and settlement incorporating “diplomatic adjustment” is viewed as biased and fundamentally flawed.¹⁴⁴ The view that only such “judicial” arbitration based on law should be “arbitration properly so called” quickly followed and has become the conventional wisdom.¹⁴⁵

This modern “judicialized” conception of interstate arbitration, however, while perhaps introducing clarity and procedural order into its practice, arguably also deterred many states from using it in the context of complex interstate disputes that are not amenable to resolution based solely on legal principles.¹⁴⁶ In addition, the strong non-legal dimensions of most interstate disputes and the growing “dichotomy between international legality and justice” led to a period of decline in the use of interstate arbitration in the 1930s.¹⁴⁷ Therefore, “as the rules governing arbitration grew in comprehensiveness, completeness and legal precision, so did recourse to arbitration as a means of resolving disputes decline.”¹⁴⁸ Interstate arbitration has thus gradually transitioned from a mechanism that “emphasizes *settlement* of a dispute” to an essentially judicial mechanism that “emphasizes the *application of law* to the dispute.”¹⁴⁹ As a result, it has come to be treated by states with “wariness and circumspection,”¹⁵⁰ excluding from its purview any dispute that cannot be decided strictly on the basis of law.¹⁵¹

It should be noted that, notwithstanding this decline in the use of interstate arbitration, since the 1970s it has gradually regained some of its credence with the drafting of the United Nations Commission on International Trade Law (UNCITRAL) *Arbitration Rules* in 1976, the creation of the Iran-United States Claim Tribunal in 1981, and the revival of the PCA during the 1990s and the first decade of the twenty-first century.¹⁵² Indeed, the range of disputes involving states that are submitted to arbitration nowadays is extremely broad, and includes disputes concerning treaty interpretation,¹⁵³ maritime and fisheries,¹⁵⁴ trade,¹⁵⁵ diplomatic

141. Even though the PCA remains an administrative institution that does not function as a traditional court and does not have compulsory jurisdiction. Pinto, *supra* note 120, at 72-73.

142. “Judicialization” has been defined as “the spread of judicial decision-making outside the judicial province proper.” Ole W. Pedersen, *An International Environmental Court and International Legalism*, 24 J. ENVTL. L. 548, 553 (2012).

143. Jonathan I. Charney, *Third Party Dispute Settlement and International Law*, 36 COLUM. J. TRANSNAT’L L. 65, 68 (1997).

144. Pinto, *supra* note 22, at 60.

145. *Id.*

146. Pinto, *supra* note 120, at 74, 87.

147. *Id.* at 124.

148. *Id.* at 70, 87-88.

149. Pinto, *supra* note 22, at 60 (emphasis in the original).

150. *Id.*; Pinto, *supra* note 120, at 88.

151. Hazel Fox, *Arbitration*, in THE INTERNATIONAL REGULATION OF FRONTIER DISPUTES 168, 193 (Evan Luard ed., 1970).

152. Howard M. Holtzmann, *The Permanent Court of Arbitration and the Evolution of a Worldwide Arbitration Culture*, in INTERNATIONAL ALTERNATIVE DISPUTE RESOLUTION: PAST, PRESENT AND FUTURE 97, 103-104, 109 (Int’l Bureau of the Permanent Court of Arbitration ed., 2000).

153. JOHN COLLIER & VAUGHAN LOWE, THE SETTLEMENT OF DISPUTES IN INTERNATIONAL LAW: INSTITUTIONS AND PROCEDURES 38 (1999); Louise B. Sohn, *The Role of Arbitration in Recent International Multilateral Treaties*, 23 VA. J. INT’L L. 171, 176-77 (1982-1983).

154. COLLIER & LOWE, *supra* note 153, at 84.

155. *Id.* at 96-97.

protection,¹⁵⁶ and foreign investment.¹⁵⁷ However, in most cases the issues submitted for resolution remain largely legal, and arbitrators tend to decide them as “judges” on the basis of strict application of international law rather than on the basis of “justice” or “equity,” thereby perpetuating the judicialized form of modern interstate arbitration.¹⁵⁸ As the distinction between arbitration and judicial settlement continues to fade, so does the prospect of states willingly arbitrating more sensitive disputes.¹⁵⁹

In order to revive the use of arbitration in the resolution of such sensitive interstate disputes such as TFDs it should be understood as the distinct, quasi-diplomatic process it was originally intended to be, in which “dispassionate intermediaries bring the facts of a dispute to light, evaluate rival claims based on their merits, and make a judgment grounded in justice, equity, and respect for international law.”¹⁶⁰ This perception of arbitration places it midway between judicial settlement and non-legal mechanisms on the spectrum of interstate dispute resolution processes. Unlike non-legal mechanisms such as negotiation or mediation, arbitration offers a final and binding third-party resolution, which is likely to be perceived as more legitimate by the parties and is especially effective where they have failed, or are unlikely, to reach a consensual agreement.¹⁶¹ In TFDs in particular, domestic political conditions or the national value attributed to a disputed water resource may prevent leaders from making voluntary concessions in negotiation or mediation, which may then result in deadlock and stalemate.¹⁶² Therefore, a process conducted by an impartial third party that “assure[s] to the disputants an opportunity for the presentation of proofs and reasoned argument”¹⁶³ and that results in a binding decision that is subject to a “standard of rationality that is different from that imposed on the results of an exchange,”¹⁶⁴ may in some cases present the only feasible way to settle a TFD. While judicial settlement by the ICJ also offers final and binding third-party dispute resolution, it should be distinguished from arbitration in at least three fundamental respects: its purpose, the nature of the process, and its effectiveness.

i. Purpose

Unlike adjudication by the ICJ, arbitration is intended to be carried out by tribunals with no continued existence, tasked solely with resolving the particular dispute before them. As a result, complex matters such as prestige, symbolic value, historical antipathies, and competition of power, which are prominent in many TFDs, are likely to be better addressed in arbitration than in judicial settlement by

156. GIDEON BOAS, PUBLIC INTERNATIONAL LAW: CONTEMPORARY PRINCIPLES AND PERSPECTIVES 349-50 (2012).

157. Brower, *supra* note 128, at 292.

158. HOBÉR, *supra* note 128, at 55.

159. BRIERLY'S LAW OF NATIONS 432 (Andrew Clapham ed., 7th ed. 2012).

160. Gregory A. Raymond, *Demosthenes and Democracies: Regime-types and Arbitration Outcomes*, 22 INT'L INTERACTIONS 1, 2 (1996).

161. Todd Allee & Paul Huth, *Legitimizing Dispute Settlement: International Legal Rulings as Domestic Political Cover*, 100 AM. POL. SCI. REV. 219, 219 (2006).

162. *Id.* at 221.

163. Lon L. Fuller, *The Forms and Limits of Adjudication*, 92 HARV. L. REV. 353, 365 (1978).

164. *Id.* at 367.

a permanent court.¹⁶⁵ While it cannot be denied that there are some advantages to a permanent judicial body that can facilitate the “homogeneous development” of international water law through uniform interpretations of principles and consistent judgments,¹⁶⁶ the limited applicability of international legal principles to region-specific and highly technical-scientific TFDs arguably renders such development a secondary objective to the effective and practical resolution of these disputes. This is so since TFDs are complex and cross-disciplinary problems in which “a focus on legal solutions . . . is likely to prove insufficient”¹⁶⁷ and “practical justice” that focuses on feasible outcomes and resolves the dispute on the ground, rather than merely proclaims the parties’ respective legal rights and obligations, should be preferred. Such justice is more likely to be achieved in arbitration since rather than deciding which party is legally right or wrong, it operates to achieve a negotiated settlement.¹⁶⁸

ii. Nature of the process

Unlike the largely fixed composition of the ICJ,¹⁶⁹ in arbitration state parties are free to choose their decision makers.¹⁷⁰ This allows them to appoint arbitrators with specific non-legal expertise, or who are familiar with the particular dispute and the parties’ interests, which is likely to inspire greater confidence in the arbitral tribunal.¹⁷¹ This ability is particularly significant in TFDs, which unlike disputes in other areas of international law, often include technical aspects that must be entrusted to experts and increasingly require broad, interdisciplinary technical skills.¹⁷² It has therefore been said that “the inclusion and understanding of technical information in the decision-making process can only serve to achieve more balanced, scientifically based, and thoughtful decisions.”¹⁷³ While the ICJ did include at one point a Specialized Chamber for Environmental Matters, which might have been more suitable for the resolution of TFDs, it has never been used and has

165. Heiko Fürst, *The Hungarian-Slovakian Conflict Over the Gabčíkovo-Nagymaros Dams: An Analysis*, 6 INTERMARIUM, 2003, at 6.

166. Eckard Reh binder & Demetrio Loperena, *Legal Protection of Environmental Rights: The Role and Experience of the International Court of Environmental Arbitration and Conciliation*, 31 ENVTL. POL’Y & L. 282, 285 (2001).

167. Pedersen, *supra* note 142, at 556.

168. Fombad, *supra* note 69, at 53.

169. Francisco Orrego Vicuña & Christopher Pinto, PEACEFUL SETTLEMENT OF DISPUTES: PROSPECTS FOR THE 21ST CENTURY, REVISED REPORT PREPARED FOR THE CENTENNIAL OF THE FIRST INTERNATIONAL PEACE CONFERENCE 290-291 (2000). A party to an ICJ case that does not have a judge of its nationality on the bench, however, may appoint an *ad hoc* judge to sit for the duration of the case, ICJ statute, Art. 31(3). RUTH MACKENZIE ET AL., THE MANUAL ON INTERNATIONAL COURTS AND TRIBUNALS 7-8 (2010); Howard M. Holtzmann, *Some Reflections on the Nature of Arbitration*, in THE FLAME REKINDLED: NEW HOPES FOR INTERNATIONAL ARBITRATION 67, 73 (Sam Muller & Wim Mijls eds., 1994).

170. D.H.N. Johnson, *International Arbitration Back in Favour?* 34 Y.B. WORLD AFF. 305, 306-307 (1980); Loretta Malintoppi, *Methods of Dispute Resolution in Inter-State Litigation: When States Go To Arbitration Rather Than Adjudication* 5 LAW & PRAC. INT’L CTS. & TRIBUNALS 133, 141 (2006).

171. Johnson, *supra* note 170, at 312.

172. Caflisch, *supra* note 17, at 236.

173. Gabriel E. Eckstein & Yoram Eckstein, *International Water Law, Groundwater Resources and the Danube Dam Case*, in GAMBLING WITH GROUNDWATER – PHYSICAL, CHEMICAL, AND BIOLOGICAL ASPECTS OF AQUIFER-STREAM RELATIONS 243, 247 (John Van Barahana et al. eds., 1998).

not been reconstituted since 2006.¹⁷⁴ The failure of the Specialized Chamber was largely due to the fact that it retained most of the structural and procedural shortcomings of the ICJ - it did not provide a process that was more expedient, cheaper, or less formal than the full Court and the appointed judges did not have a wider knowledge of international environmental law.¹⁷⁵ Furthermore, even though the ICJ may appoint experts to assist it in deciding TFDs, it has not done so in previous disputes and has been criticized for failing to deal with scientific uncertainty in a progressive manner through deeper interaction with the experts, thereby missing “an opportunity to established itself as a careful and systematic court that can be entrusted with complex scientific evidence in the resolution of international disputes.”¹⁷⁶

In addition to selecting their decision-makers, state parties retain considerable control over the course of the arbitral process since they can design their own arbitration agreement and decide on the procedural and substantive rules to be applied by the tribunal.¹⁷⁷ They can also determine the rules under which scientific and technical evidence will be examined and treated, rather than be subject to the prescribed rules of a particular judicial forum.¹⁷⁸ As already noted, the role of technical and scientific data in TFD resolution is significant, and the ICJ is arguably ill equipped to evaluate and incorporate such data in its decision-making. In the *Gabcikovo-Nagymaros* case,¹⁷⁹ for instance, the ICJ rendered its decision without evaluating either the effects of the disputed measure on the region’s environment, or the data concerning the amount and quality of water required to maintain a balanced natural and human environment.¹⁸⁰

Furthermore, arbitration, where properly understood, involves a more contextual and broad interpretation and application of non-legal or equitable principles,¹⁸¹ which is particularly advantageous to the resolution of TFDs in light of the controversial state of international water law and since the resolution of such disputes may depend as much upon the balancing of competing interests as upon the ascertainment and application of legal rules.¹⁸² Arbitration assigns to law a “basic but by no means exclusive function,”¹⁸³ and arbitrators are therefore not as concerned with

174. ZENGERLING, *supra* note 108, at 173-74; TIM STEPHENS, INTERNATIONAL COURTS AND ENVIRONMENTAL PROTECTION 362 (2009).

175. Malgosia Fitzmaurice, *The International Court of Justice and Environmental Disputes*, in INTERNATIONAL LAW AND DISPUTE SETTLEMENT 17, 54 (Duncan French et al. eds., 2010).

176. Al-Khasawneh, *supra* note 18, at 355-56. *See also* Pulp Mills on the River Uruguay (Arg. v. Uru.), Judgment, 2010 I.C.J. 14, 108, 117 (Apr. 20 2010) (joint dissenting opinion by Khasawneh, J. and Simma, J.).

177. J.G. MERRILLS, INTERNATIONAL DISPUTE SETTLEMENT 83, 89-91 (5th ed. 2011); Fox, *supra* note 151, at 170-71.

178. Philippe Sands, *Concluding Remarks*, in RESOLUTION OF INTERNATIONAL WATER DISPUTES 417, 422-24 (Int’l Bureau of the Permanent Court of Arbitration ed., 2003).

179. Gabčíkovo-Nagymaros Project (Hung. v. Slov.), Judgment, 1997 I.C.J. 7 (Sept. 25).

180. Gabriel Eckstein & Yoram Eckstein, *A Hydrogeological Approach to Transboundary Ground Water Resources and International Law*, 19 AM. U. INT’L L. REV. 201, 246 (2003).

181. The ICJ, on the other hand, would arguably turn to equity only when a decision is not possible on legal grounds. M. Lachs, *Arbitration and International Adjudication*, in INTERNATIONAL ARBITRATION: PAST AND PROSPECTS 37, 41 (A.H.A. Soons ed., 1990).

182. Robert Q. Quentin-Baxter, *Second Report on International Liability for Injurious Consequences Arising out of Acts Not Prohibited by International Law*, 1981 Y.B. INT’L L. COMMISSION 103, 115.

183. Pinto, *supra* note 22, at 49.

stating the law and settling the dispute by strict application of legal rules¹⁸⁴ as they are with reconciling national interests, easing tensions, encouraging lasting co-operation, and achieving an acceptable settlement.¹⁸⁵

This is of particular importance where a dispute involves more than strictly legal questions, as is the case in many TFDs, and where equitable considerations form the basis for determining rights and obligations also under applicable legal principles.¹⁸⁶ Since in TFDs the facts and circumstances of each dispute, rather than any *a priori* rule, will ultimately be the determinants of the rights and obligations of the parties,¹⁸⁷ the mechanism selected for their resolution should be able to effectively account for non-legal issues and guarantee states a fair and practical solution. Ultimately, international law must play a role in the resolution of TFDs, but this should not necessarily be a leading role. As one scholar has noted, “international law in itself does not provide solutions for conflicts of water uses” but “there is no answer to water problems without international law.”¹⁸⁸ The quasi-diplomatic true nature of arbitration is arguably best suited for balancing legal and non-legal considerations and ensuring that local norms or practices and changing circumstances that are not reflected in the principles of international water law are properly taken into account in the resolution of TFDs.¹⁸⁹

iii. Effectiveness

Unlike the zero-sum nature of judicial settlement, which emanates from its rigid procedures and adherence to legal rules, arbitration is better able to produce a compromise solution that avoids a winner-takes-all outcome¹⁹⁰ and is therefore more likely to generate among disputing parties a sense of having been treated fairly.¹⁹¹ This may make the process appear less risky for states engulfed in disputes involving political or vital interests, which in turn may improve the prospects of successful implementation of arbitral decisions.¹⁹² Such compromise solutions are particularly important in TFDs, where cooperation and coexistence among states should arguably take precedence over pronouncement of their legal rights.¹⁹³ Arbitral awards are also more likely to be complied with by states since they exert “legal, moral and diplomatic force.”¹⁹⁴ This is so not only because states prefer to avoid

184. Jean-Pierre Queneudec, *The Eritrea-Yemen Arbitration: Its Contribution to International Law*, in THE ERITREA-YEMEN ARBITRATION AWARDS 1998 AND 1999 1, 5-6 (Bette Shifman ed., 2005).

185. Pinto, *supra* note 22, at 49-50.

186. Johnson, *supra* note 170, at 311. It should be noted that the ICJ has been increasingly prepared to hear politically charged disputes and “depoliticize” them by separating the legal aspects of the case from the political. However, this arguably risks neglecting a party’s non-legal interests, which may result in the rejection of judicial decisions by losing parties. MERRILLS, *supra* note 177, at 155-156.

187. MCCAFFREY, *supra* note 14, at 365.

188. Larurence Boisson de Chazournes, *Elements of a Legal Strategy for Managing International Watercourses: The Aral Sea Basin*, in INTERNATIONAL WATERCOURSES: ENHANCING COOPERATION AND MANAGING CONFLICT 65, 67 (Salman M.A. Salman & Larurence Boisson de Chazournes eds., 1998).

189. ISLAM, *supra* note 49, at 4-5.

190. MERRILLS, *supra* note 177, at 291; Lachs, *supra* note 181, at 41.

191. Lachs, *supra* note 181, at 41.

192. MERRILLS, *supra* note 177, at 291.

193. ISLAM, *supra* note 49, at 372.

194. Malintoppi, *supra* note 170, at 159; Richard B. Bilder, *Adjudication: International Arbitral Tribunals and Courts*, in PEACEMAKING IN INTERNATIONAL CONFLICT: METHODS & TECHNIQUES 195, 200 (I. William Zartman ed., 2007). While ICJ judgments can be enforced through recourse to the UN Security Council pursuant to Article 94 of the UN Charter, this mechanism has never been used.

the political and reputational costs of non-compliance,¹⁹⁵ but mainly because state parties become personally invested in the arbitral process by controlling the issues submitted for resolution, the procedural and substantive rules governing the process, and the identity of the arbitrators.¹⁹⁶

This “true nature” of arbitration therefore enables it to provide a “genuine alternative method of dispute settlement.”¹⁹⁷ The extent of party control over the arbitral proceedings, coupled with the possibility of having non-jurists render binding decisions on the basis of extra-legal considerations and in accordance with the particular circumstances of the case, distinguish interstate arbitration both from non-binding mechanisms and from judicial settlement by a permanent international court.¹⁹⁸ Unfortunately, interstate arbitration has lost this original quality in its modern form as a result of the prevalent misconception that arbitration and judicial settlement represent a “distinction without a difference.”¹⁹⁹

B. The PCA and TFDs

The second element in the proposed approach to interstate arbitration in the resolution of TFDs sets out to revamp the *Optional Rules for Arbitration of Disputes Relating to Natural Resources and/or the Environment (Rules)* of the PCA. Established in 1899, “the PCA is an intergovernmental organization tasked with facilitating arbitration and other modes of dispute resolution between states, state entities, intergovernmental organizations, and private parties.”²⁰⁰ While it does not operate as a permanent international arbitral body, it does have a permanent institutional basis and the PCA secretariat receives requests for arbitration, assists in the selection of arbitrators, facilitates the conduct of arbitrations, and promotes the services offered by the court to potential litigants.²⁰¹

In 2001, the PCA adopted the *Rules*, which seek to “address the principal lacunae in environmental dispute resolution.”²⁰² The *Rules* are based on the 1976 *UNCITRAL Arbitration Rules* “but were modified to reflect the unique characteristics of disputes relating to natural resources, conservation or environmental protection.”²⁰³ The *Rules* are optional in that they can only be used pursuant to the agreement of the parties when a specific dispute arises, unless they were incorporated by reference in an environmental agreement.²⁰⁴ Despite being designed specifically

195. MERRILLS, *supra* note 177, at 114, 293; Beth A. Simmons, *Capacity, Commitment, and Compliance: International Institutions and Territorial Disputes*, 46 J. CONFLICT. RESOL. 829, 835 (2002); JACOB BERCOVITCH & JUDITH FRETTER, REGIONAL GUIDE TO INTERNATIONAL CONFLICT AND MANAGEMENT FROM 1945 TO 2003, at 27 (2004).

196. Nejib Jibril, *The Binding Dilemma: From Bakassi to Badme - Making States Comply with Territorial Decisions of International Judicial Bodies* 19 AM. U. INT'L L. REV. 633, 668 (2004).

197. Pinto, *supra* note 120, at 86-87; Aman Mahray McHugh, *Resolving International Boundary Disputes in Africa: A Case for the International Court of Justice*, 49 HOWARD L.J. 209, 239 (2005).

198. Raymond, *supra* note 160, at 3.

199. Pinto, *supra* note 120, at 87.

200. Judith Levine, *Information About the Activities of the Permanent Court of Arbitration in Environmental Disputes in the Context of Energy Projects* 1 (Sept. 2014), http://voldgiftsinstitutet.dk/wp-content/uploads/2015/01/levine_-_pca_environment__26_energy_activities.pdf.

201. STEPHENS, *supra* note 174, at 30.

202. *Environmental Dispute Resolution*, PERMANENT COURT OF ARBITRATION, http://www.pca-cpa.org/showpage03fd.html?pag_id=1058 (last visited Dec. 12, 2016).

203. Levine, *supra* note 200, at 6.

204. STEPHENS, *supra* note 174, at 31-32.

for disputes concerning environmental issues, the *Rules* have been scarcely employed by states to resolve environmental disputes, and have not been used at all in the context of transboundary freshwater disputes. There have only been six cases commenced under the *Rules*; four concerned Emissions Reduction Purchase Agreements and two concerned contractual agreements relating to emission reductions projects.²⁰⁵ In three of these cases, moreover, both parties were private entities, in one case the respondent was a public limited company, in one case the respondent was a private entity wholly owned by a public limited company, and in one case the respondent was a government agency.²⁰⁶ The *Rules* have been included in one multilateral instrument that concerns water issues,²⁰⁷ but have yet to be employed in the resolution of TFDs.²⁰⁸ Nonetheless, the *Rules* do offer several advantages in this context.

First, they provide procedural rules that can expedite the arbitral process and prevent deadlock where, for instance, the parties cannot decide on the arbitrators or the procedure for their appointment.²⁰⁹ Moreover, the *Rules* include specific provisions for multiparty disputes, which can facilitate the participation of multiple states in the resolution of TFDs,²¹⁰ as well as provisions for the resolution of disputes that do not reference an applicable treaty or convention,²¹¹ which is particularly useful in TFDs where the allocation or use of water is not set out in an agreement. Another advantage of the *Rules* is that they combine the benefits of a permanent and well-respected administrative institution, on the one hand, and an ad-hoc process, on the other hand. The main benefit of an existing body is that it already benefits from the support of states.²¹² Establishing a new permanent water court or tribunal would only “add a further layer of institutional complexity to the patchwork of jurisdictions already operating in the environmental field, with all the implications this carries both for increased jurisdictional competition and conflict, and for the possible fragmentation of international law.”²¹³ Moreover, while a permanent forum with compulsory jurisdiction may be desirable in some respects, there appears to be little appetite in the international community for such a forum in the environmental context,²¹⁴ and even less so in the context of TFDs. As for the benefits of an ad hoc process, one of the reasons for the success of arbitration in environmental disputes

205. JUDITH LEVINE & NICOLA PEART, PERMANENT COURT OF ARBITRATION (“PCA”), INFORMATION ABOUT THE ACTIVITIES OF THE PERMANENT COURT OF ARBITRATION IN DISPUTES RELATING TO THE ENVIRONMENT AND/OR NATURAL RESOURCES (2015).

206. *Id.*

207. 2003 *Protocol on Civil Liability and Compensation for Damage Caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters to the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes and to the 1992 Convention on the Transboundary Effects of Industrial Accidents*, art. 14 (Kiev, May 21, 2003), (https://www.unece.org/fileadmin/DAM/env/civil-liability/documents/protocol_e.pdf).

208. Levine, *supra* note 200, at 6.

209. LEVINE & PEART, *supra* note 205.

210. Although the *Rules* “do not empower the appointing authority to appoint all arbitrators when multiple claimants or respondents fail to make a joint appointment. Such a provision, if desirable to the parties, may be added to the arbitration agreement.” PERMANENT COURT OF ARBITRATION, *supra* note 24, at 184.

211. Matthew Vespa, *An Alternative to an International Environmental Court? The PCA’s Optional Arbitration Rules for Natural Resources and/or the Environment*, 2 LAW & PRAC. INT’L CTS. & TRIBUNALS 295, 312 (2003).

212. STEPHENS, *supra* note 174, at 60.

213. *Id.* at 61.

214. *Id.* at 62.

is that “most of them have taken place on an ad hoc basis....”²¹⁵ Moreover, the record of state compliance has been said to be “far more mixed when environmental litigation is commenced unilaterally on the basis of compulsory procedures.”²¹⁶ Therefore, the PCA and the *Rules* provide disputing states with the benefits of a prescribed yet flexible procedure as well as institutional support, and can therefore be useful in the resolution of TFDs. However, they should be “sensitized”²¹⁷ and adapted to this specific context.

For instance, the *Rules* currently presume that the arbitral proceedings will be confidential, unless the parties agree otherwise.²¹⁸ This has been criticized for running against the prevailing trend in both domestic and international environmental law to open environmental decision-making processes to public scrutiny and participation. It may also be seen as problematic in the TFD context since transparency is essential for ensuring that arbitrators remain accountable to the international community in deciding such disputes in accordance with prevailing environmental standards and values.²¹⁹ However, some degree of confidentiality may also facilitate the resolution of TFDs by way of arbitration since it would protect information impacting national security²²⁰ and would allow states to obtain a binding decision in a process that is more in line with the quasi-diplomatic true nature of arbitration. Still, the strict presumption in favor of confidentiality should be relaxed in the TFD context, for instance by requiring that the final award be made public. Keeping arbitral awards confidential “lags behind the practice of public international law” and particularly in TFDs that affect interests beyond those of the parties to the arbitration, a potential lack of award publication can leave parties without access to the arbitral proceedings further disenfranchised.²²¹ Moreover, since the established practice of other international courts and tribunals, such as the International Tribunal for the Law of the Sea, the ICJ, and the judicial bodies operating under the WTO and ICSID systems, is to publish decisions, it is unlikely that states would be deterred from using the *Rules* if they included a similar provision.²²²

In terms of composition and powers of the arbitrators, the *Rules* could provide that unless the parties agree otherwise arbitral tribunals shall include at least one relevant scientist or technical expert, rather than rely on expert witnesses that have no decision-making authority.²²³ The *Rules* could also expressly authorize arbitral

215. *Id.* at 34.

216. *Id.*

217. PEDERSEN, *supra* note 142, at 557.

218. The *Rules* provide for proceedings to be held *in camera*, PERMANENT COURT OF ARBITRATION, *supra* note 24, at 197, art 25.4, and for the award to be confidential unless the parties agree otherwise. *Id.* at 201, art. 32.6. Also, a party can request information classified as confidential within the arbitration. *Id.* at 193, art. 15.4.

219. STEPHENS, *supra* note 174, at 33-34; Vespa, *supra* note 211, at 310. See also, ARMIN VON BOGDANDY & INGO VENZKE, IN WHOSE NAME?: A PUBLIC LAW THEORY OF INTERNATIONAL ADJUDICATION 157-206 (2014).

220. Vespa, *supra* note 211, at 320.

221. *Id.* at 319.

222. *Id.*

223. Francesca Romanin Jacur, *Remarks on the Role of Ex Curia Scientific Experts in International Environmental Disputes*, in INTERNATIONAL COURTS AND THE DEVELOPMENT OF INTERNATIONAL LAW 452 (Nerina Boschiero et al. eds., 2013). The *Rules* currently provide for the establishment of Specialized Panels pursuant to a specialized list of arbitrators “considered to have expertise in the subject-matters of the dispute at hand for which these *Rules* have been designed,” PERMANENT COURT OF ARBITRATION, *supra* note 24, at 190, art. 8.3, however they do not require the appointment of such arbitrators. Also,

tribunals to reach compromise solutions by considering all relevant circumstances, including non-legal factors. For instance, the *Rules* could provide that arbitral tribunals shall decide on the basis of “respect for” international law²²⁴ as well as hydrological, geographical, economic, political, and cultural considerations that may be relevant in the particular case.²²⁵ This would serve to acknowledge that “the job of arbitrators . . . should be to arrive at politically viable compromises rather than simply ‘legally correct’ decisions.”²²⁶

Furthermore, the *Rules* currently allow for disputes involving parties other than states, including international organizations and private parties,²²⁷ but they do not address the issue of the participation of non-State actors as *amicus curiae* in interstate disputes.²²⁸ Since resolving TFDs requires assessing the full range of issues, needs, interests, and demands of the relevant parties and addressing those most affected by the outcome, the *Rules* should explicitly allow for the participation of relevant non-state actors as *amicus curiae* with leave of the arbitral tribunal.²²⁹ Relevant NGOs, for instance, “might bring to the attention of the parties and the [arbitral tribunal] . . . legal arguments and factual information that is not known to them or not brought forward by the parties because it does not serve their interests.”²³⁰ In TFDs, in particular, “[i]ncreased participation by diverse actors reshapes the discourse from legal rights over sovereignty and territory to interest-based problem solving”²³¹ and can ensure that local customs and practices of water-use and sharing are taken into account in the arbitral decision-making. This, in turn, “ensures the availability of culturally and contextually appropriate practices” and creates a flexible system capable of adapting to new circumstances and avoiding undue constraint imposed by legal precedents that are detached from the reality on the ground.²³² States should also be explicitly allowed to include non-state actors in their delegations in hearings before arbitral tribunals, and tribunals should be authorized to consider unsolicited submissions by non-state entities.²³³ Even if documents provided in arbitral proceedings are not accessible to the general public they should arguably be made available to selected relevant NGOs.²³⁴ Such NGOs could be selected through an accreditation system that would filter the organizations that are allowed

persons with scientific and technical expertise are suggested as experts rather than arbitrators. *Id.* at 199, art. 27.5.

224. As was provided in the Hague Conventions of 1899 and 1907.

225. See generally Eva Kleingeld, *Third Party Involvement in Fostering Transboundary Cooperation in Central Asia*, GLOBAL WATER P'SHIP, <http://www.gwp.org/en/ToolBox/CASE-STUDIES/Asia/Third-party-involvement-in-fostering-transboundary-cooperation-in-Central-Asia-471/> (last visited Dec. 12, 2016) (a recent case study on the water conflict between Uzbekistan and Tajikistan concerning the construction of the Rogun dam has concluded that “political and cultural factors play a significant role” in water conflicts and should therefore be considered by third-party interveners.)

226. Richard B. Bilder, *Some Limitations of Adjudication as an International Dispute Settlement Technique* 23 VA. J. 'INT'L L. 1, 4 (1982).

227. PERMANENT COURT OF ARBITRATION, *supra* note 24, at 183-844; STEPHENS, *supra* note 174, at 255.

228. ZENGERLING, *supra* note 108, at 256.

229. *Id.* at 193, 216, 232.

230. *Id.* at 217.

231. Spain, *supra* note 106, at 376-77.

232. *Id.* at 377.

233. This is the case in WTO dispute resolution, ZENGERLING, *supra* note 108, at 198.

234. *Id.* at 224.

to contribute to and participated in arbitral proceedings and set out rules governing access.²³⁵

IV. CONCLUSION

Interstate arbitration was originally conceived as a sensitive, albeit law-oriented mechanism, but has been gradually transformed into a system of “high legal refinement” that is functionally assimilated with judicial settlement.²³⁶ It has thus become “an engine of adjudication indistinguishable from its judicial counterpart.”²³⁷ This perception of arbitration, however, is detrimental to the peaceful resolution of complex interstate disputes such as TFDs since judicial settlement may prove “unhelpful, irrelevant, overly adversarial, and simply too abstract”²³⁸ in this context. Moreover, international water law as currently formulated is arguably inadequate, in and of itself, as a tool for the resolution of TFDs and states therefore tend to avoid what they perceive to be “legal” dispute resolution mechanisms. At the same time, bilateral negotiation and third-party non-binding mechanisms may also prove inadequate for the resolution of TFDs. It is precisely in these intractable cases that the original and true nature of arbitration should be revived so that it may serve as an effective dispute resolution alternative in which “arbitrators can dispense with legal formalities and may apply whatever procedural rules and substantive law best fit a case.”²³⁹ Used in this way, arbitration is able to account for both legal and non-legal considerations, adapt to the particular circumstances of the dispute, and provide maximum control to the state parties while producing a binding decision that avoids deadlock.

This Article does not suggest that there are no advantages to purely diplomatic or strictly legal dispute resolution mechanisms, or combinations of these.²⁴⁰ Neither does it claim that arbitration is a panacea for all TFDs, or that it does not require states’ good faith and political will to make peace rather than wage war, as do all interstate dispute resolution mechanisms. Indeed, the choice of the means to be used in the resolution of TFDs largely depends on the nature of the case to be decided and on the approach of the disputing states.²⁴¹ Rather, this Article is intended, first, to serve as a reminder of arbitration’s original purpose and its potential to provide “mediatory decisions, exempt from the strict norms of the law of nations” and thereby resolve “the Gordian knot of non-legal disputes.”²⁴² Second, it offers a practical way for doing so by revamping the PCA *Rules*. Ultimately, it is only through a comprehensive consideration of the relevant legal and policy issues, as

235. *Id.* at 224-25 (such rules were developed, for instance, by the WTO Appellate Body in the *Asbestos* case).

236. Pinto, *supra* note 120, at 65.

237. Thomas E. Carbonneau, *National Law and the Judicialization of Arbitration: Manifest Destiny, Manifest Disregard, or Manifest Error*, in INTERNATIONAL ARBITRATION IN THE 21ST CENTURY: TOWARDS “JUDICIALIZATION” AND UNIFORMITY? 115, 130 (Richard B. Lillich and Charles N. Brower eds., 1993).

238. Kristjánssdóttir, *supra* note 16, at 354.

239. Walter Mattli, *Private Justice in a Global Economy: From Litigation to Arbitration* 55 INT’L ORGS. 919, 920 (2001).

240. Spain, *supra* note 106, at 346 (e.g., integrated methods).

241. Caflisch, *supra* note 17, at 237.

242. J.H.W. VERZIJL, 8 INTERNATIONAL LAW IN HISTORICAL PERSPECTIVE: INTER-STATE DISPUTES AND THEIR SETTLEMENT 19 (1976).

well as the underlying science involved²⁴³ that states will be able to resolve their TFDs effectively and in such a way that the disputed resource suffices for present needs and preserved for future generations,²⁴⁴ and such consideration is best undertaken in arbitration.

243. Eckstein & Eckstein, *supra* note 180, at 258.

244. Gabriel Eckstein, *Application of International Water Law to Transboundary Groundwater Resources, and the Slovak-Hungarian Dispute Over Gabčíkovo-Nagymaros* 19 SUFFOLK TRANSNAT'L L. REV. 67, 99 (1995).